

Solutions: Designing Studies Checkpoint 2

The next two questions refer to the following information:

Research Question: What is the combined effect of medication and diet on blood pressure in adult males?

A randomized, controlled experiment investigated this question using a random sample of 540 adult males as subjects. At the beginning of the study, researchers measured the blood pressure of all the subjects. Each subject was given a month's supply of either Drug A, Drug B, or a placebo, then was assigned to be on either a low-fat diet or a low-salt diet for that month-long period. At the end of the month, the researchers measured the blood pressure of each subject again, and compared the two blood pressure readings.

Question 1

How many different groups are there altogether in this study?

Select one answer.

10 points

☐

(a) 2

☐

(b) 3

☐

(c) 4

☐

(d) 5

☐

(e) 6

Correct answer: (e)

Question 2

Which of the following is/are the explanatory variable(s) in this study?

Select all that apply.

10 points

☐

(a) Blood pressure before the study

☐

(b) Blood pressure after the study

☐

(c) Difference in the two measurements of blood pressure

☐

(d) Type of drug given

☐

(e) Type of diet

Correct answer: (d) and (e)

Question 3

A simple random sample of 1,110 adult Americans is selected, and each person is asked the following question:

Select one answer.

10 points

In light of the huge national deficit, should the government at this time spend additional money to establish a national system of health insurance?

Only 39% of those responding answered yes. The results of this survey:

☐

(a) are reasonably accurate because it used a large simple random sample.

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(b) probably overstate the percentage of people who favor a system of national health insurance because of the question's wording.

☐

(c) probably understate the percentage of people who favor a system of national health insurance because of the question's wording.

☐

(d) is inaccurate because of voluntary response.

☐

(e) is inaccurate because of convenience sampling.

Correct answer: (c)

Question 4

The method of "Randomized Response" is:

Select one answer.

10 points

☐

(a) a sampling method.

☐

(b) a method in which subjects answer the questions in a survey in a random order.

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(c) used to minimize the bias in the responses of subjects to sensitive questions.

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(d) a method in which subjects answer each of the questions in a survey with a random guess.

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(e) none of the above.

Correct answer: (c)

Please answer the question below. Your response will not be graded, but will be available for your instructor to read.

Question 5

What is the main reason for using randomization in an experiment?

0 points

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